IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application:

Claims 1-13. (Cancelled)

14. (Previously Presented) A method of searching for time offset information embedded in a first signal, comprising:

correlating the first signal with a second signal by adjusting a phase of the first signal with respect to the second signal to produce a plurality of first correlated values for each of the first signal phases;

transforming the first correlated values for each of the first signal phases into a plurality of second correlation values related to a frequency content of their respective first correlation values, wherein the frequency content of the first correlation values for each of the first signal phases comprises a plurality of frequency components, the second correlation values for each of the first signal phases each corresponding to a different one of the frequency components; and

searching for the time offset information by evaluating the second correlation values, wherein searching comprises identifying the second correlation value with a maximum magnitude over a first portion of the first signal phases and identifying the second correlation value with a maximum magnitude over a second portion of the first signal phases, noncoherently combining the second correlation values for the frequency components having the identified second correlation values to produce a plurality of third correlation values, and using the third correlation value having a maximum magnitude to determine whether the time offset information is present.

15. (Original) The method of claim 14 wherein the correlation of the first and second signals further comprises multiplying a different portion of the first signal with the second signal to produce a plurality of product values for each of the first signal phases, and for each of the first phase signals, coherently combining different portions of the respective product values to produce a plurality of coherent sums each comprising one of the first correlation values.

16. (Previously Presented) The method of claim 14 wherein the time offset information corresponds to a pilot signal.

17. (Previously Presented) The method of claim 16 wherein the time offset information corresponds to a pilot signal spread by a code, and the second signal comprises a replica of the code.

18. (Original) The method of claim 17 wherein the code comprises a pseudo-random code.

19. (Original) The method of claim 14 wherein the transformation of the first correlation values comprises a Fourier transform.

20. (Original) The method of claim 19 wherein the Fourier transform comprises a discrete Fourier transform.

21. (Original) The method of claim 19 wherein the Fourier transform comprises a fast Fourier transform.

22. (Cancelled)

23. (Previously Presented) The method of claim 14 wherein the time offset information search comprises identifying the second correlation value with a maximum magnitude, and selecting the frequency component of the identified second correlation value.

Claims 24-37 (Cancelled)

38. (Currently Amended) ~~The searcher of claim 37~~ A searcher, comprising:

a correlator configured to produce a plurality of first correlation values from first and second signals, the first correlation values comprising at least one partial coherent sum, wherein the correlator comprises a multiplier configured to multiply the first signal with the second signal to produce a plurality of product values, and the multiplier comprises 96 multipliers each producing one product value;

a processor configured to transform the first correlation values into a plurality of second correlation values each relating to a different frequency component of the first signal, wherein the processor derotates and combines the at least one partial coherent sums and converts the result from a time-domain signal to a frequency domain signal; and

a detector configured to monitor the second correlation values over a time period, and select one of the frequency components having a peak second correlation value, wherein the multiplier further comprises a plurality of adders each configured to coherently combine different portions of the product values to produce a plurality of coherent sums each comprising one of the first correlation values, and further configured to monitor the second correlation values over a second

time period, and select a second one of the frequency components having a peak second correlation value over the second time period, and further wherein the selected frequency components for both time periods each comprises a portion of the second correlation values each having a complex value, the searcher further comprising a converter configured to convert each of the complex values into a magnitude value, and an adder configured to noncoherently combine the second correlation values for the time period with the second correlation values for the second time period.

39. (Original) The searcher of claim 38 wherein the selected frequency components for both time periods are the same frequency component.

40. (Original) The searcher of claim 38 further comprising a second detector configured to detect a peak value for the noncoherently combined second correlation values.

41. (Previously Presented) A searcher, comprising:

means for producing a plurality of first correlation values from first and second signals, the first correlation values comprising at least one partial coherent sum;

means for transforming the first correlation values into a plurality of second correlation values each relating to a different frequency component of the first signal, wherein the means for transforming comprises means for derotating and means for combining the at least one partial coherent sums and means for converting the result from a time-domain signal to a frequency domain signal;

means for monitoring the second correlation values over a time period;

means for selecting one of the frequency components having a peak second correlation value;

means for monitoring the second correlation values over a second time period; and

means for selecting one of the frequency components having a peak second correlation value over the second time period, wherein the selected frequency components for both time periods each comprises a portion of the second correlation values each having a complex value, the searcher further comprising means for converting each of the complex values into a magnitude value, and means for noncoherently combining the second correlation values for the time period with the second correlation values for the second time period.

42. (Original) The searcher of claim 41 wherein the means for producing the first correlation values comprises means for multiplying the first signal with the second signal to produce a plurality of product values, and means for coherently combining different portions of the product values to produce a plurality of coherent sums each comprising the one of the first correlation values.

43. (Original) The searcher of claim 42 wherein the means for producing the first correlation values further comprises means for buffering the first signal to be multiplied with the second signal.

44. (Original) The searcher of claim 41 wherein the means for transforming the first correlation values comprises a Fourier transform.

45. (Original) The searcher of claim 44 wherein the Fourier transform comprises a discrete Fourier transform.

46. (Original) The searcher of claim 44 wherein the Fourier transform comprises a fast Fourier transform.

47. (Cancelled)

48. (Cancelled)

49. (Previously Presented) The searcher of claim 41 wherein the selected frequency components for both time periods are the same frequency component.

50. (Previously Presented) The searcher of claim 41 further comprising means for detecting a peak value for the noncoherently combined second correlation values.

Claims 51-63 (Cancelled)

64. (Previously Presented) Computer-readable media embodying a program of instructions executable by a computer program to perform a method of searching for time offset information in a first signal, comprising:

correlating the first signal with a second signal by adjusting a phase of the first signal with respect to the second signal to produce a plurality of first correlated values for each of the first signal phases;

transforming the first correlated values for each of the first signal phases into a plurality of second correlation values related to a frequency content of their respective first correlation values, wherein wherein the frequency content of the first correlation values for each of the first signal phases comprises a plurality of frequency components, the second correlation values for each of the first signal phases each corresponding to a different one of the frequency components; and

searching for the time offset information by evaluating the second correlation values, wherein searching comprises identifying the second correlation value with a maximum magnitude over a first portion of the first signal phases and identifying the second correlation value with a maximum magnitude over a second portion of the first signal phases, noncoherently combining the second correlation values for the frequency components having the identified second correlation values to produce a plurality of third correlation values, and using the third correlation value having a maximum magnitude to determine whether the time offset information is present.

65. (Original) The computer-readable media of claim 64 wherein the correlation of the first and second signals further comprises multiplying a different portion of the first signal with the second signal to produce a plurality of product values for each of the first signal phases, and for each of the first phase signals, coherently combining different portions of the respective product values to produce a plurality of coherent sums each comprising one of the first correlation values.

66. (Previously Presented) The computer-readable media of claim 64 wherein the time offset information corresponds to a pilot signal.

67. (Previously Presented) The computer-readable media of claim 66 wherein the time offset information corresponds to a pilot signal spread by a code, and the second signal comprises a replica of the code.

68. (Original) The computer-readable media of claim 67 wherein the code comprises a pseudo-random code.

69. (Original) The computer-readable media of claim 64 wherein the transformation of the first correlation values comprises a Fourier transform.

70. (Original) The computer-readable media of claim 69 wherein the Fourier transform comprises a discrete Fourier transform.

71. (Original) The computer-readable media of claim 69 wherein the Fourier transform comprises a fast Fourier transform.

72. (Cancelled)

73. (Previously Presented) The computer-readable media of claim 64 wherein the time offset information search comprises identifying the second correlation value with a maximum magnitude, and selecting the frequency component of the identified second correlation value.

Claims 74-86 (Cancelled).